STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 8180

Petition of Vermont Gas Systems, Inc. for	**)**
a certificate of public good, pursuant to	**)**
30 V.S.A. § 248, authorizing the construction	**)**
of the "Addison Rutland Natural Gas Project	**)**
Phase 2 (ARNGP Phase 2)" to extend natural gas	**)**
Transmission facilities in Franklin and	**)**
Addison Counties, for service to the	**)**
Ticonderoga mill in New York, and	**)**
Construction of two Community Gate Stations	**)**
For distribution service in the towns of Cornwall	**)**
And Shoreham, Vermont	**)**

DIRECT TESTIMONY OF

JAMES MOORE

ON BEHALF OF

CONSERVATION LAW FOUNDATION AND

VERMONT PUBLIC INTEREST RESEARCH GROUP

JUNE 13, 2014

James Moore's testimony addresses the energy supply, greenhouse gas emission and nonrenewable resource dependence of the proposed project.

Direct Testimony
of
James Moore

Q1. Please state your name and occupation.

A1. My name is James Moore and I am co-president at SunCommon.

Q2. On whose behalf did you prepare this direct testimony?

A2. I prepared this testimony on behalf of the Conservation Law Foundation and Vermont Public Interest Research Group.

Q3. Please summarize your work experience and educational background.

A3. I am co-founder and co-president of SunCommon, a renewable energy company that has helped more than 800 Vermont homes go solar with an aggregate of more than 5 MW of electric solar generation since 2012.

Prior to the creation of SunCommon, I was the Clean Energy Program Director at the Vermont Public Interest Research Group, where I worked to advance policies to reduce greenhouse gas emissions and transition Vermont away from fossil fuels and nuclear power and towards greater reliance on energy efficiency and clean renewable power. My work included facilitating the preparation of reports that explained energy issues to a broader audience, including *Clean Heat: Comfortable Homes, Affordable Future (2012)* and *Repowering Vermont: Replacing Vermont Yankee for a Clean Energy Future (2011)*, each of which

explained the transformation of our energy supply. My advocacy work included supporting expansion of energy efficiency resources for Vermont and legislative advocacy advancing clean energy. I served on the Vermont System Planning Committee, and I served on the Board of the Energy Coop of Vermont.

Prior to joining VPIRG, I worked on electoral campaigns and worked for Greenpeace and Green Corps. I have a BS degree from Tufts University.

Q4. Have you previously testified before the Vermont Public Service Board ("the Board" or "PSB")?

A4. Yes. I have presented at Board workshops regarding energy efficiency and renewable energy and have submitted over 800 CPG applications for SunCommon projects.

Q5. Please summarize your testimony.

A5. My testimony addresses renewable energy, energy supply, economic and greenhouse gas emission impacts of the proposed Addison Rutland Natural Gas Project. In particular, my testimony addresses the proposed project's impacts on renewable energy supply and Vermont's ability to meet its clean energy and greenhouse gas reduction goals and rebuts the claim by Vermont Gas that natural gas will replace oil and propane.

Q6. Please describe SunCommon projects.

A6. SunCommon provides renewable energy projects to meet customer electrical and thermal needs. The projects SunCommon installs include roof-mounted and ground-mounted PV and cold weather air source heat pumps. We also talk with our customers fairly regularly about transitioning water heating off of fossil fuels to renewable supplied electricity.

Q7. Please describe the renewable thermal projects that SunCommon is involved with.

A7. We ask every customer if they are interested in transitioning from existing heating sources to renewable supplied electric heat pumps. If they are interested, we arrange financing and install cold weather air source heat pumps that utilize solar power to meet thermal needs. To meet water heating needs we finance and install solar PV to power hot water heaters.

Q8. Do SunCommon installations replace fossil fuels? If so, please explain how.

A8. SunCommon thermal projects replace whatever fuel source a customer is otherwise using. It ranges from electricity to oil, propane, natural gas, and wood.

Q9. In your experience, what motivates customers to install renewable power to meet their thermal needs?

A9. The primary motivator is reducing environmental impacts. The energy systems we install reduce greenhouse gas emissions and provide power from local renewable energy. Our customers also appreciate the stable energy costs provided

by our projects. They provide long term savings and a hedge against rising energy costs.

Q10. Based on your experience, do you agree that the availability of natural gas always replaces oil or propane in Vermont?

A10. No. Natural gas will offset a variety of fuels, including wood and pellets as well as oil and propane. Going forward, we expect thermal renewable energy to continue to be price competitive with natural gas. Customers converting to gas could otherwise have converted to renewable energy supply. We expect this to continue over at least the next two decades. The availability and cost-effectiveness of cold weather heat pumps is a new option for Vermonters. It has developed in the past few years and provides an economical alternative for many households. It also supports the goals of Vermont's Comprehensive Energy Plan which call for meeting 90% of the state's energy needs with renewable energy.

Q11. Please explain the impact of expanding natural gas on increasing renewable energy supply.

A11. Expanding natural gas undermines the state's ability to meet its clean energy goals set forth in the Comprehensive Energy Plan. Customers who convert to natural gas will spend up to thousands of dollars to replace existing supply with natural gas. Once they do this, they have an economic disincentive, in the form of a sunk cost, to make a further switch to renewable energy. Expanding gas infrastructure creates a lost opportunity where we lose the ability to more rapidly

transition to renewable energy supplies. The expanded infrastructure fosters a need to pay for that and encourage broad use of natural gas instead of reserving the limited gas supply for the highest need, which going forward will be some transportation and peak uses instead of heating uses that can be met with renewable electricity. By way of example, natural gas prices this winter reached record high levels. There was high demand for natural gas for heating and electric generation. Expanding natural gas supply and winter demand for that gas aggravates this situation. Overall, the energy supply decisions we make need to support, or at least not hinder, increasing our reliance on renewable energy. Creating new opportunities to use more natural gas creates new burdens on the gas supply. At a minimum, any expansion should ensure the use of natural gas meets Vermont's long term energy goals and facilitates meeting 90% of Vermont's energy with renewables. Simply granting permission to build a pipeline without any conditions to ensure that the gas will be used to facilitate this transformation fails to meet Vermont's energy goals.

Q12. Does this conclude your testimony at this time?

A12. Yes.